

REMARKS AND ARGUMENTS

Claims 1-8 and 11-18 are pending in the present application, of which claims 1 and 17 are independent. Claims 9 and 10 have been canceled. Claims 1, 3 and 7 have been amended. Support for the amendments to claim 1 can be found on page 3, lines 21-24. Applicant files herewith the Declaration of Dr. Fanwen Zeng.

Claim 3 was objected to on the ground that the amount of clay is "without basis." In a conversation with the undersigned on July 20, the Examiner confirmed that the intended objection to claim 3 was to the amount of copolymer, the basis for the clay having been added in the previous Amendment. Applicant has now added the term "by weight" for the copolymer in claim 3.

Claims 1, 4-7 and 9-18 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The first ground is that there is no support for the percentage monomer being weight percent. Although Applicant believes the previously cited statement in the specification regarding weight percentages is sufficient, the undersigned agreed in a conversation with the Examiner to submit a Declaration with notebook pages attached to substantiate that monomer percentages were expressed by weight. Accordingly, paragraph 4 of Dr. Zeng's Declaration and the attached exhibits demonstrate this fact for several copolymers listed in the present application. Applicant respectfully submits that the Declaration should be entered because Applicant was first made aware that it would be required in the final Office Action, and thus could not have submitted it earlier.

With respect to claim 7, the objected-to term, "from 1 to 1000 nm," has been removed from the claim, and replaced with the original term "colloidal range." Applicant submits that the dictionary definition of the latter term provided in the previous response shows that one skilled in the art would understand what is meant by "colloidal range."

The § 112 rejection is moot as to claims 9-10, which have been canceled.

Claims 1-18 were rejected under 35 U.S.C. § 103 over Laryea et al. in view of Merritt et al. and either Gardlik et al. or Dowell et al. Applicant respectfully traverses this rejection.

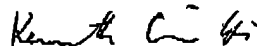
Applicant argued previously that Laryea et al. discloses only a composition containing Aculyne™ 28 copolymer and 14.6% surfactant, and provided data showing that Aculyne 28 does not provide the desired increase in viscosity in a high-surfactant formulation, such as that claimed by Applicant. The Examiner commented that "it has not been clearly established if Aculyne 28 falls outside the scope of the present claims." In accordance with the Examiner's suggestion,

Applicant submits the Declaration of Dr. Zeng, who asserts in paragraph 5 that Aculyn 28 "does not contain residues of any C₂-C₄ alkyl (meth)acrylate monomers." Therefore, Aculyn 28 is not within the scope of the present claims, all of which require such monomers.

The Examiner also objected to Applicant's response on the basis that the data presented by Applicant are not commensurate with the scope of the claims. In the aforementioned conversation of July 20, the Examiner suggested that Applicant submit additional data, which Applicant has done in the Declaration. The data establish the limits for key claim limitations, the amount of acrylic acid and the amount of C₂-C₄ alkyl (meth)acrylate. Paragraph 7 of the Declaration demonstrates that copolymers having an acrylic acid monomer content of 35% or an ethyl acrylate content of 35% formed gels and were thus unusable in the present invention. Paragraph 6 demonstrates that copolymers having 42% and 52% ethyl acrylate were found to have rheological properties within the scope of those shown by compositions within the present invention. Accordingly, claim 1 was amended to raise the minimum C₂-C₄ alkyl (meth)acrylate content to 40%. A copolymer having 80% ethyl acrylate was shown in Paragraph 7 to be unsuitable due to limited solubility, and accordingly claim 1 was amended to limit C₂-C₄ alkyl (meth)acrylate content to a maximum of 75%. The maximum acrylic acid content recited in claim 1 is 30%, less than the unsuitable 35% sample, and slightly higher than the Table 1 samples at 20%. Applicant believes that these additional data leave no doubt that the limits in claims 1 and 17 are supported by the data.

Applicants believe that the foregoing amendments have placed the application in condition for allowance without expanding the scope of any pending claim, and therefore, without raising new issues or requiring any further consideration, and respectfully request that this Amendment be entered and all claims be passed to allowance at this time. In any event, Applicants believe that this Amendment places the claims in better form for consideration on appeal, and should be entered under 37 C.F.R. § 1.116. However, if the Examiner has any further objections to the application, Applicants respectfully request that the Examiner contact Applicants' undersigned attorney by telephone at (847) 649-3891 to discuss the remaining issues.

Respectfully submitted,



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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Docket No. A01446
KC/

In re application of:
Thomas Richard Tepe

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Serial No.: 10/665,329

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Group Art Unit: 1714

Filed: September 18, 2003

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Examiner: Vickey M. Ronesi

For: Thickener for High-Surfactant Aqueous Systems

DECLARATION UNDER 37 C.F.R. § 1.132

I, Fanwen Zeng, of 48 Hudnut Lane, Belle Mead, N.J. 08502, declare and say as follows:

1. I have been employed at the Rohm and Haas Company since 1999. I have a Bachelor of Science degree in Chemistry from Nanjing University (1987), and a Ph.D. in Chemistry from University of Illinois at Urbana-Champaign (1997). I have been involved with our Consumer and Industrial Specialties Chemical business since 2001, with our Plastics Additives business from 1999 to 2000, and Coating business from 2000 to 2001. My job responsibilities have included polymer synthesis. I am currently a senior scientist of the Company.

2. I have been the coinventor of eight U.S. patent applications filed during my tenure at Rohm and Haas Company.

3. I have prepared, or supervised preparation of the polymers used in the present invention, and I am thoroughly familiar with its subject matter and

background. I have read the Official Action dated July 5, 2005 in the above-mentioned US patent application (Serial No. 10/665,329).

4. In 2001, I supervised preparation (in Spring House, PA) of the polymers in the above-mentioned US patent application. Monomer content of all polymers was calculated and presented in the application as weight percent. Copies of three notebook pages are attached showing the amount of each monomer in grams (first full column of numbers) and as weight percent (next column) for the polymers described in the application, Table 1, rows 3, 5 and 6. Other information on the pages has been redacted as it is not relevant to the present question.

5. I am familiar with Aculyn™ 28 rheology modifier, which is a product of Rohm and Haas Company. This product does not contain residues of any C₂-C₄ alkyl (meth)acrylate monomers.

6. In August, 2005, I supervised preparation (in Spring House, PA) of formulations containing 22.3% surfactant, as described in Examples on pages 7-9 of the present application, but with the polymers listed in the table below. The viscosity and clarity of these compositions were measured as described in the application. The results are presented in the following table.

Rheology Modifier (weight % monomer)	Viscosity @ 0.6 d/cm ² (no clay)	Viscosity @ 0.6 d/cm ² (0.08% clay)	Viscosity Change, %	Viscosity @ ca. 1000 d/cm ² (no clay)	Viscosity @ ca. 1000 d/cm ² (0.08% clay)	Viscosity Change, %	NTU with clay
52EA/10MAA/20AA/ 18Lipo1//0.145TMPDE// 0.075nDDM	133	247	85.7	24	27	12.5	78
42EA/20MAA/20AA/ 18Lipo1//0.2DAP// 0.1nDDM	190	326	71.6	25	28	12	22

It is evident from the data that the first two polymers (EA: 52 and 42%, respectively) provide, in a high-surfactant composition, the desired increase in

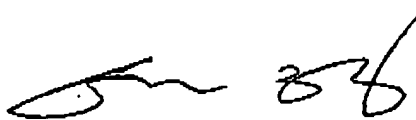
viscosity at low shear rates (see % viscosity change in the fourth column). Moreover, they do not increase viscosity to an unacceptable degree at high shear rates, and also display acceptable clarity, as shown by the NTU measurements. Overall, these polymers compare favorably to those in rows 1-3 of Table 1 in the present application.

7. In August, 2005 I supervised preparation (in Spring House, PA) of the following polymers, with monomer amounts in weight percent:

- A. 35EA/27MAA/20AA/18Lipo1//0.2DAP//0.1nDDM
- B. 50EA/5MAA/35AA/10Lipo1//0.2DAP//0.1nDDM
- C. 80EA/10AA/10Lipo1//0.2DAP//0.1nDDM

Each of polymers A and B formed a gel rather than a polymer latex. These polymers are thus unsuitable for use in an aqueous composition such as the one claimed in the present application. Polymer C was only partially soluble in water, and thus it is also unsuitable for use in an aqueous composition.

8. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United State Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.



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Date: September 2, 2005